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Inserted blinders of tantalum foil were devised for monocular training of visual discrimination habits and the testing of interocular transfer in fishes. A series of 16 fish (Bathygobius soporator) with a blinder on the right eye were trained against an initial preference to swim to the smaller, higher, and less brightly colored of 2 lures presented simultaneously. Controls were run to rule out the use of nonvisual cues. After overtraining, the blinder was shifted to the opposite (left) eye. Retention tests revealed excellent or good interocular transfer in 5 of the 16 cases. Lesser degrees of transfer were evident in 4, while in the remaining 7, the transfer was poor or negligible. When the blinder in these last 11 cases was shifted again to the untrained (right) eye, the scores promptly underwent a marked improvement to approximately their previous level. An additional shift of the blinder to the trained (left) eye in 2 of these cases caused again deterioration of the habit in one, but excellent transfer occurred in the other. In a second series of 13 fish, monocular performances on visual discrimination habits learned with both eyes uncovered indicated that learning and retention had not been confined to one dominant eye as found in some earlier experiments with pigeons. Apparently the brain organization of this teleost fish permits interocular transfer, but at the same time, the neural mechanisms involved are not so well developed that good transfer is automatically assured in all instances..... Roger W. Sperry.